

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

JOSEPHUS A.H.M. KAHLMAN ET AL

NL000711

Serial No.

Filed: CONCURRENTLY

Title: DIGITAL TRANSMISSION SYSTEM HAVING DISPARITY DEPENDENT  
CHANNEL CODE WORDS

Commissioner for Patents  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination, please  
amend the above-identified application as follows, where marked-up  
version of the amended claims 3, 6, 7, 8, 9, is attached as

Appendix A:

IN THE CLAIM

Please amend the claim as follows:

2 3. The digital transmission system (1) according to claim 1,  
3 characterized in that the encoder (5) and/or decoder (6)  
4 comprise(s) a look-up table (10,; 11) containing data about the  
5 levels of the multilevel input signal corresponding to code words  
6 of the DC-balanced digital channel code.

7  
8  
9 6. The digital transmission system (1) according to claim 1,  
10 characterized in that one or more of the not selected code words is  
11 used as a synchronization word.

12  
13 7. A transmitter (2) suited for application in a digital  
14 transmission system (1) according to claim 1, the digital  
15 transmission system (1) comprising: a transmitter (2), a receiver  
16 (3), and a transmission channel (4) coupled to both the transmitter  
17 (2) and the receiver (3), whereby the transmitter (2) is provided  
18 with an encoder (5) wherein a multilevel input signal is encoded  
19 such, that an encoded DC-balanced digital channel code is  
20 transmitted to the receiver (3), characterized in that the encoder  
21 (5) is embodied to match levels of the multilevel input signal to  
22 code words of the DC-balanced digital channel code such, that  
23 disparities of the selected code words are symmetrically grouped  
24 around zero disparity.

25  
26 8. A receiver (3) suited for application in a digital  
27 transmission system (1) according to claim 1, the digital  
28 transmission system (1) comprising: a transmitter (2), a receiver  
29 (3), and a transmission channel (4) coupled to both the transmitter  
30 (2) and the receiver (3), whereby the receiver (3) is provided with  
31 a decoder (6), wherein a received encoded DC-balanced digital  
32 channel code is decoded into a multilevel output signal,  
33 characterized in that the decoder (6) is embodied to decode the  
34 received DC-balanced digital channel code words, whose disparities  
35 are symmetrically grouped around zero disparity.

36

9. A digital code word set for application in the digital  
transmission system (1) according to claim 1, comprising code words  
having disparities, characterized in that the disparities of the  
code words are symmetrically grouped around zero disparity.

REMARKS

The foregoing amendment to the claims was made solely to avoid filing the claim in the multiple dependent form so as to avoid the additional filing fee.

The claim was not amended in order to address issues of patentability and Applicants respectfully reserves all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserves their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or continuing applications.

Respectfully submitted,

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## Appendix A

### Version with Markings to Show Changes Made to the Claim

The following are marked up versions of amended claim 6:

1  
2  
3 3. The digital transmission system (1) according to claim 1  
4 ~~or 2~~, characterized in that the encoder (5) and/or decoder (6)  
5 comprise(s) a look-up table (10,; 11) containing data about the  
6 levels of the multilevel input signal corresponding to code words  
7 of the DC-balanced digital channel code.

8  
9  
10 6. The digital transmission system (1) according to ~~one of~~  
11 ~~the claims 1-5~~ claim 1, characterized in that one or more of the  
12 not selected code words is used as a synchronization word.

13  
14 7. A transmitter (2) suited for application in a digital  
15 transmission system (1) according to ~~one of the claims 1-6~~ claim 1,  
16 the digital transmission system (1) comprising: a transmitter (2),  
17 a receiver (3), and a transmission channel (4) coupled to both the  
18 transmitter (2) and the receiver (3), whereby the transmitter (2)  
19 is provided with an encoder (5) wherein a multilevel input signal  
20 is encoded such, that an encoded DC-balanced digital channel code  
21 is transmitted to the receiver (3), characterized in that the  
22 encoder (5) is embodied to match levels of the multilevel input  
23 signal to code words of the DC-balanced digital channel code such,

24 that disparities of the selected code words are symmetrically  
25 grouped around zero disparity.

26  
27 8. A receiver (3) suited for application in a digital  
28 transmission system (1) according to ~~one of the claims 1-6~~ claim 1,  
29 the digital transmission system (1) comprising: a transmitter (2),  
30 a receiver (3), and a transmission channel (4) coupled to both the  
31 transmitter (2) and the receiver (3), whereby the receiver (3) is  
32 provided with a decoder (6), wherein a received encoded DC-balanced  
33 digital channel code is decoded into a multilevel output signal,  
34 characterized in that the decoder (6) is embodied to decode the  
35 received DC-balanced digital channel code words, whose disparities  
36 are symmetrically grouped around zero disparity.

37  
38 9. A digital code word set for application in the digital  
39 transmission system (1) according to ~~one of the claims 1-6~~ claim 1,  
40 comprising code words having disparities, characterized in that the  
41 disparities of the code words are symmetrically grouped around zero  
42 disparity.